

A METHOD OF ENDPOINT DETECTION USING V-I PROBE DIAGNOSTICS

ABSTRACT

A plasma processing control system including a V-I probe for effectively monitoring a plasma processing chamber, where the probe can provide electrical parameters in response to a radio frequency (RF) supply (e.g., about 2 MHz, about 27 MHz, or about 60 MHz), a processor coupled to and/or included with a commercially available probe product that can provide harmonics for each of the electrical parameters, and a controller coupled to the processor that can select one of the electrical parameters and one of the associated harmonics for endpoint detection for a plasma processing step is disclosed. The electrical parameters can include voltage, phase, and current and the plasma processing application can be dielectric etching. A system according to embodiments of the invention may be particularly suited for dielectric etching in a production environment.